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## Patent Abstracts of Japan

PUBLICATION NUMBER : 61198806  
PUBLICATION DATE : 03-09-86

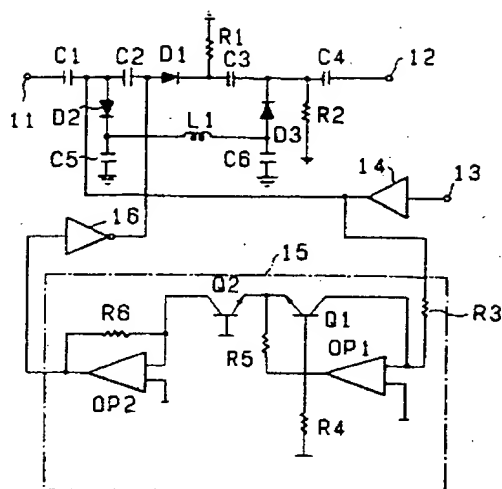
APPLICATION DATE : 27-02-85  
APPLICATION NUMBER : 60036632

APPLICANT : FUJITSU LTD;

INVENTOR : GOTO HARUHIKO;

INT.CL. : H03H 7/25 H03H 11/24 // H03G 3/10

TITLE : VOLTAGE CONTROLLED VARIABLE  
ATTENUATOR



ABSTRACT : PURPOSE: To keep excellent matching by applying a voltage proportional linearly to a control voltage to the 1st pin diode and applying the voltage having a characteristic inverting the inverse logarithm characteristic of the control voltage to the 2nd pin diode as a bias voltage so as to keep the input/output impedance nearly constant.

CONSTITUTION: The control voltage from an input terminal 13 is amplified by a linear amplifier 14, fed to the 1st pin diodes D2, D3 and an output of the linear amplifier 4 is fed to an inverse logarithm amplifier 15. The inverse logarithm amplifier 15 amplifies the output of the linear amplifier 14 in the inverse logarithm characteristic, the nonlinearity characteristic of a transistor Q1 connected to a feedback circuit of an operational amplifier OP1 is utilized to obtain a desired amplifier characteristic. The output voltage of the inverse logarithm amplifier 15 is amplified inversely by an inverter 16 so as to be the bias voltage of the 2nd pin diode D1 and then the bias voltage fed to the 2nd pin diode D1 has a characteristic inverting further the inverse logarithm characteristic to the control voltage.

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